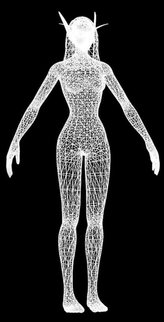
World of Warcraft Character Rig Manual

Thank you so much for buying my WoW Rig!
I tried to make all of them as user-friendly as possible, but without any pre-knowledge it will be confusing, expecially when you try to upgrade it yourself or modify something.
With that said, as a Rule of Thumb: Always make multiple saves (increments) so you don't have to start again when the rig should break when you make changes!



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1. BEFORE USE CHECKLIST:

1. Set the Working Units to Meter, because I developed them with this setting.
When using the Length Tool you can see that the Characters match realife human sizes.
That is the reason the setting is set to Meter.
If you have problems with lengths, scaling or the rig size, setting the working units to meter might help!

2. Newly added objects from WoW Model Viewer must be scaled from 1 to 88 on X,Y,Z (70,7 for Orc)!

3. Only scale the whole Model with the red circle (character_root_transform_CTRL) below the Rig.

4. I deliberately didn't lock most values so you can easily customize the rig with your own tweaks (additional facial joints for example)!

5. Be aware that when you move the torso_CTRL only the chest region moves and the arms stay in place which can result
in arm and shoulder skin deformations when you move them around.
Try to move the whole upper body firstand then adjust the arms to that position.

6. Always check the whole mesh after mirroring skin weights!
There can always be errors, especially in the hand & arm region, and near the eyes.
To avoid eye errors, open them up until there are no faces that go through (overlap) each other.
Use "One to one" or "Closest Joint" depending on the mesh.

7. Reset rig positions by using the right preset in the joint Attribute Editor, bindPose won't work most of the time.

2. Add Armor directly from the Game

2.1 WoW Model Viewer

The famous software WoW Model Viewer is as useful as ever to allow us to extract every armor available in the game and import it into Maya, 3DS Max etc.!
Download:
https://wowmodelviewer.net/wordpress/?page_id=27
The program can be really buggy, but everything should be fixable with a hard, long google search!

IMPORTANT:
Legion Patch 7.3.5 is not working with Model Viewer.
Just download an older Version.
You can also download old Game-Clients from previous expansions through Private Servers and such and install the fitting Model Viewer Version.

2.2 Importing Models

In WoW Model Viewer:
1. Select the right Character.
2. Change Animation to one of the many FacePoses.
3. File -> Export Model -> OBJ...

In Maya:
1. File -> Import -> select the .obj file
2. In Outliner: Select all obj. parts -> set Scale(X,Y,Z) to 88
3. The meshes should have the same size. If something doesn't exactly fit you can manually adjust it.
4. Freeze Transform after moving objects.
5. Modeling: Mesh Display -> Set to Face
6. Mesh -> Cleanup... (Safety measure)
7. Edit Mesh -> Merge OPTIONS -> Threshold: 0.00001
(The last number shouldn't even be visible after applying: 0.0000)
This makes sure that the mesh isn't deformed but the polygons are getting connected.

Now you can select all polygons that are merged instantly with face-select mode.
Shift + Doubleklick on the mesh to select all polygons.
You can split objects like boots so two boots are not one object anymore.
I will use this example to illustrate the last steps.

8. Select one boot
9. Edit Mesh -> Extract

You can combine them to one object again with Mesh -> Combine
! The polygons won't be merged though, so just repeat step 4.3. !

10. Add polygons (add higher quality) with Mesh -> Smooth.
! If the smooth is too strong select Maya Catmull-Clark in the Options and reduce the Continuity. !

3. Bind Armor to the Body

Select the joint (see below) and then select the appropriate Armor Piece. Go to Constraint -> Parent Constraint.

Head: Neck_end_bind_JNT
Shoulders: leftArm_start_bind_JNT & rightArm_start_bind_JNT
Bracelets/Gloves: leftForeArm_result_JNT & rightForeArm_result_JNT
Weapon: leftHand_result_JNT & rightHand_result_JNT
Boots: leftShin_result_JNT & rightShin_result_JNT
Cape: shoulder_bind_JNT
Girdles & Robes: hip_bind_JNT

How to equip cloths like Boots:
Use Wrap Deformer in the Deform Menu.
Make sure that the foot is completely in the boot and that no foot vertices are seen with the boot on.
Use the move tools soft selection to help you with that.

Select Boot geometry Shape (Outliner:Display -> Shapes), then select the rig geometry
Use Deform -> Wrap.
Go to the Wrap node, uncheck "Auto Weight Threshold"
Adjust the values until it gives the desired effect.

4. Adding textures and materials

- The models are rendered in Maya 2018 with Arnold 5.
- The preset-materials are all aiStandardSurface.
- Textures are added with Bump2d and a texture file.

Depending on your goal you don't have to use Arnold, but in that case you can't use aiStandardSurface.
Open the Hypershade to see every setting for yourself.

5. Add environments with objects from the Game to Maya

1. Download WoW Model Exporter: https://marlam.in/obj/
2. Download Blender
3. Download 3ds Max; same Version as your Maya Version (2018 to 2018)!
4. Choose the quadrant you want to export
Check out the full map on: https://newmaps.marlam.in/Azeroth/147/4/-53.781/40.688
5. Export maptile with WoW Model Exporter
6. Watch this video (refer to comment section if you have problems):
https://www.youtube.com/watch?v=IK6xfbxWOKg&t=25s
Basically you download ADT Importer for Blender so the object positions of the map tile are saved
7. Import maptile with ADT Import
8. Export whole scene as .obj (Check "Objects as OBJ Groups" and "Material Groups" on the left side)
9. Import scene to 3ds Max like in the video
10. To go File -> Send to: Maya

6. Upgrade the Rig yourself with additional facial expressions, hand gestures, etc.

Change menu to Animation -> Key -> Set Driven Key -> Set...

Driver:
- Facial_CTRL, rightHand_CTRL or any other control with Attributes

Driven:
- The joint or object you want to be moved
- Select and key the starting- and end-positions
(Can conflict with Constrains if the object is directly connected to a Constraint)

FAQ

Q: Why is left/rightArm_twist_GRP outside of character_root_transform_CTRL?
A: The model doesn't scale correctly otherwise. If you know why let me know!

Q: Why are some HIK-controls not moving even though the values are changing?
A: Activate the IK/FK-dependency in HIK The Controls Tab so that the circle for that control becomes green.

Q: Why did you smooth the rig instead of preview-smoothing it by pressing 3 for better performance?
A: The polygon-count was too small to allow satisfying skin painting, so I smoothed it even though it reduces performance.
There is still a backup low-poly Version of the mesh in GEO_GRP though.

Q: I need to add, delete or change polygons from the mesh but when I want to skin-paint the influences are spread all over the place!
A: Sadly that still is a common Maya Rigging problem.
1. Copy the mesh, make the changes.
2. Right click Layer: result_JNT_LYR -> Select Objects
3. Select the mesh -> Skin -> Bind Skin
4. Right click Layer: hands_face_JNT_LYR -> Select Objects
5. Select the mesh again -> Skin -> Edit Influences -> Add Influence
6. Select the old mesh, then select the new mesh -> Skin -> Copy Skin Weights
For the copying to work both meshes need to have the same joints influencing them.
Add or remove joints by Skin -> Edit Influences.
Also make sure the meshes are the closely the same (No Go's: closed eyes and open eyes, limbs on different positions, different Viewport coordinates)

Q: Why add hands_face_JNT_LYR with Add Influence to the mesh?
A: These are the joints that I didn't want to have premade influences because they are not precise enough.
To get no premade influences go to Add Influence OPTIONS -> check: Lock weights

Q: Why is there a group with a hidden head_CTRL parented under head_CTRL_trans?
A: This setup makes it possible to change the Rotation of the control pivot without changing the position of the whole head.
You need to unparent the head_CTRL, change the position of the pivot and reparent it.